Appendix D
Corps of Engineers Automation Plan (CEAP) Briefing for Assistant Secretary of the Army (Civil Works) 7 August 1990*

* Appendix D has been recreated. However, it retains the spelling, punctuation, and style of the original.

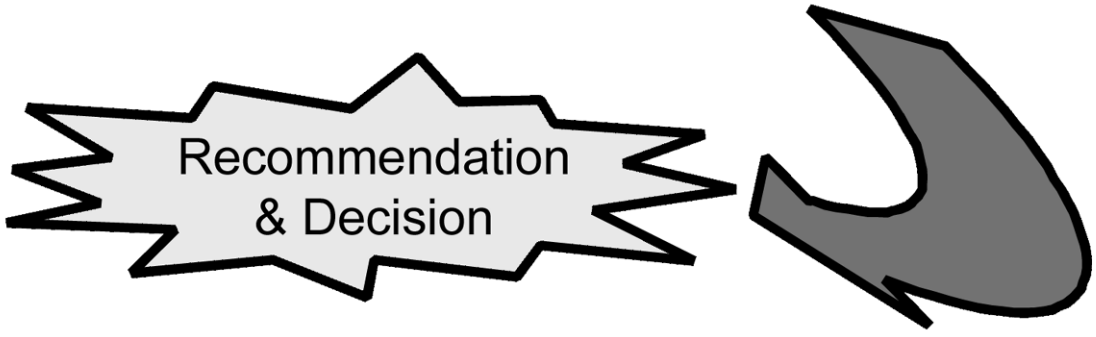
THE CHALLENGE

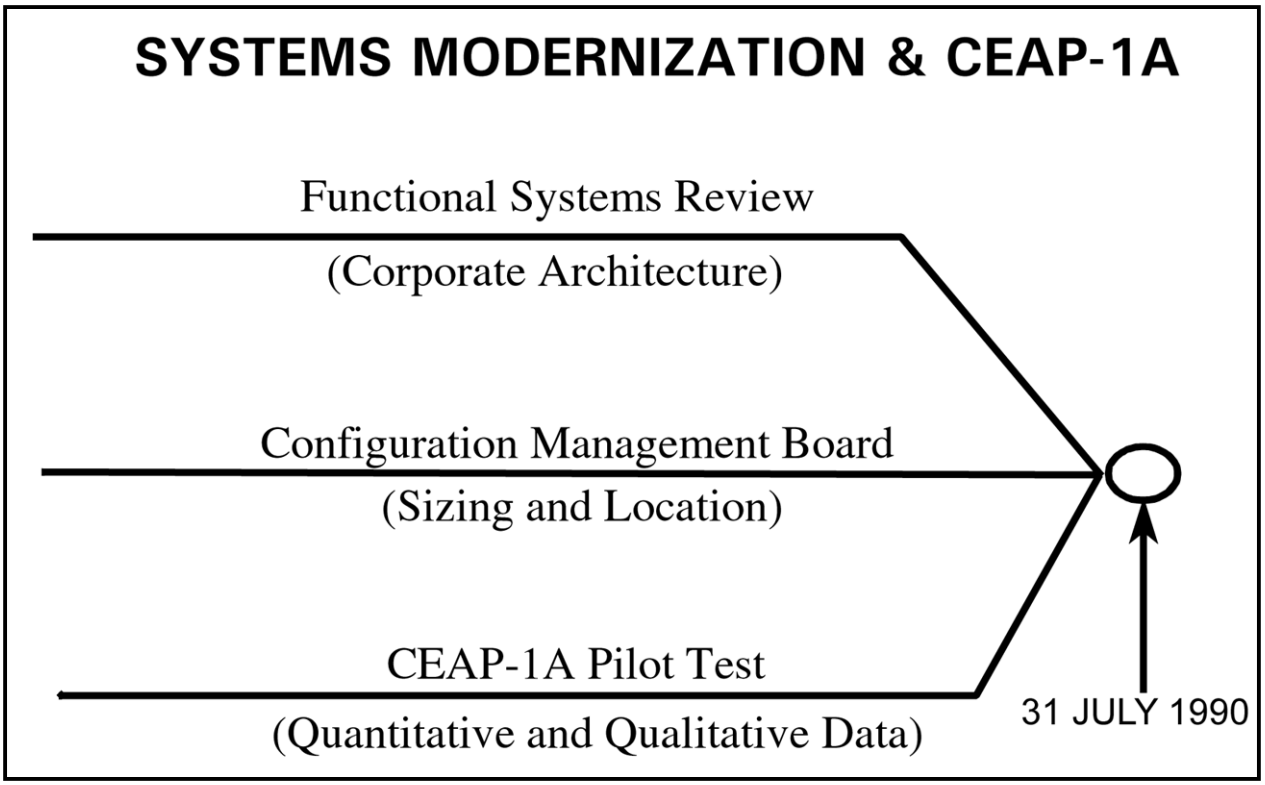
- Need must be demonstrated
- Based on Requirements—Work Corps must do
- Do Project Management
- Demonstrate Economic Justification —CEAP vs Other
- Demonstrate Affordability to Districts

SOLUTIONS (Hardware/Software/Comm)

Current Universe of Requirements	Functional Model (Now & Future)	Future Universe of Requirements
Project Management Real Estate Design Research and Dev		Project Management Real Estate Design Research and Dev

Options	Main Frame	Mini	Cost
Proj Mgt	0		$
Real Estate		0	$
Design	0		$
Res & Dev	0	0	$





USACE SYSTEM PROPONENTS

"The Rose Getters"

Directorate of Civil Works (MG Kelly)
- Program Management - Mr. Cluff
- Life Cycle Project Management - Dr. Steinberg
- Planning - Mr. Bates
- Operations and Maintenance - Mr. Elmore

Directorate of Military Programs (Mr. Carton)
- Project Management - Mr. Dunnam
- Environmental Restoration - Mr. Watling
- Program and Execution Support - Mr. Sheehey
- Construction - Mr. Hanson
- Engineering - Mr. Kennon

Directorate of Real Estate - Dr. Wilmer

Directorate of Human Resources - Mr. Loschialpo

Directorate of Resource Management - Mr. Wallace

Directorate of Logistics Management - Mr. Thomas

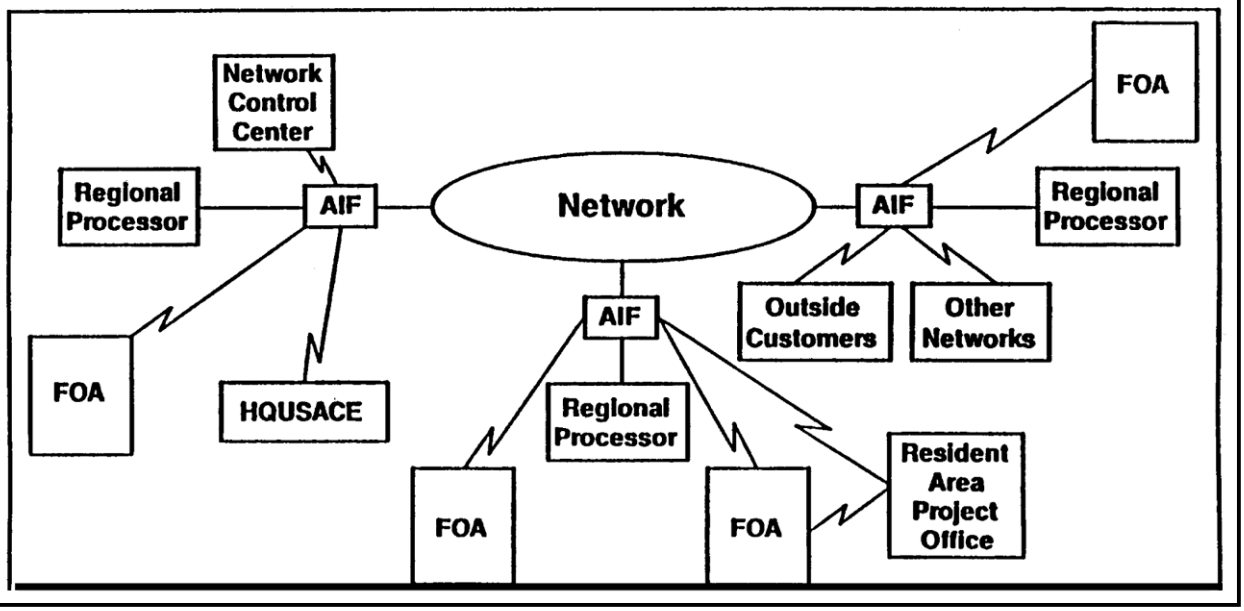
INTEGRATING THE FUNCTIONAL SYSTEMS

- Assumptions
  - —Management
  - —Technical
- Evaluation Criteria
- Doing the Work
  - —FOAs
  - —HQUSACE and Divisions
- Determining "Drivers"
- Developing the Corps Architecture

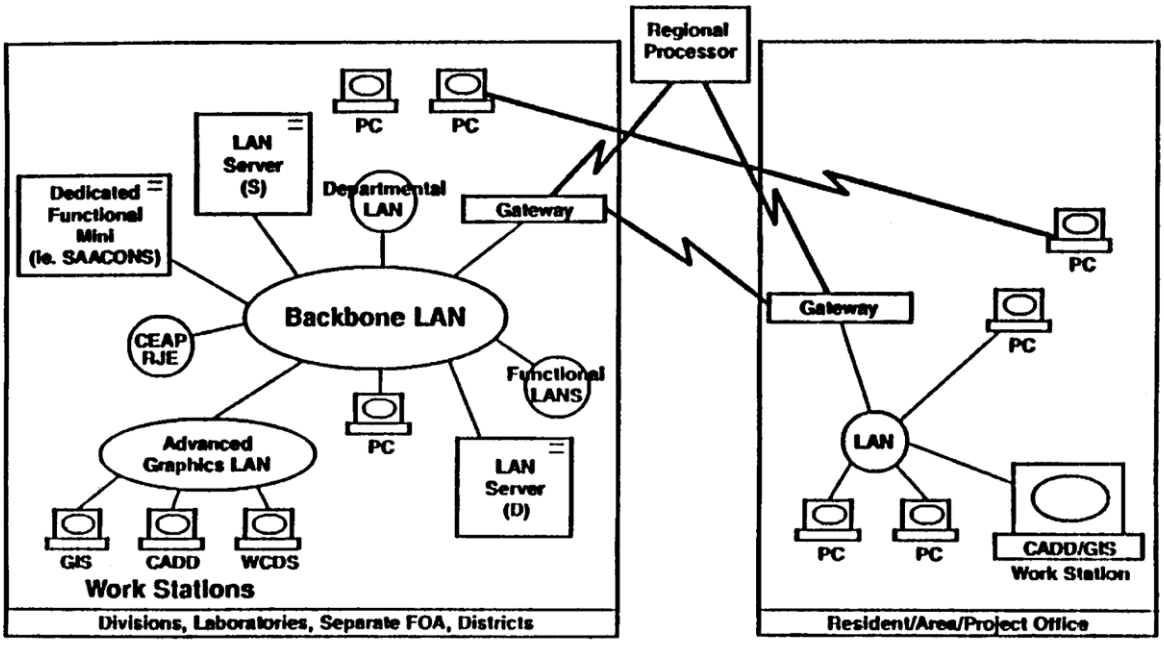
DOING THE CORPS' WORK
Key Strategies

- Match Automation to the Way We Do Business
- Define District Required Capabilities (Process, Communications, Data Source Entry)
- Provide for HQS (USACE/Division) Requirements
- Define Requirements at Organizational Tiers
- Provide for Data Sharing
- Reduce Data Bases to Those Necessary
- Advantage Communications
- Provide Connectivity
- Use Existing Systems and Equipment Wherever Feasible

THE 1995 CORPS ARCHITECTURE NETWORK PERSPECTIVE



THE 1995 CORPS ARCHITECTURE FOA & RESIDENT OFFICE PERSPECTIVE



CONCLUSIONS

- Best Solution To Meet USACE Functional Requirements - 1995
- Reduces Data Bases and Maximizes Connectivity
- Maximizes Use of Existing Equipment and Systems (Don't Junk Anything)
- Meets Requirements of AR 25-3
- Provides Guidelines for Future Most Effective FOA Architecture (LANS)
- Basis for Identifying Requirements for Configuration Management

CEAP-1A PILOT TEST

Stress Test at WES

- Capacity Tests for F&A and AMPRS
- Functional Tests for Modernized Systems
- Tests of CYBER 962 and Minicomputer
- Capacity Tests for '95 Architecture
- Tests Completed

SOFTWARE TESTED

- F&A Civil, Military, and Revolving Fund
- AMPRS
- Payroll
- CETAL
- Funds Control
- Real Estate
- Personnel Reporting System
  - * Financial Management
  - * ARMS
  - * PCMIS

* New Systems

PILOT TEST RESULTS

CYBER Systems Match Corps Needs

Exceptional Performance and Reliability
Relative Performance Increase from 2 to 12

Performance Tuning Achieved and Continuing

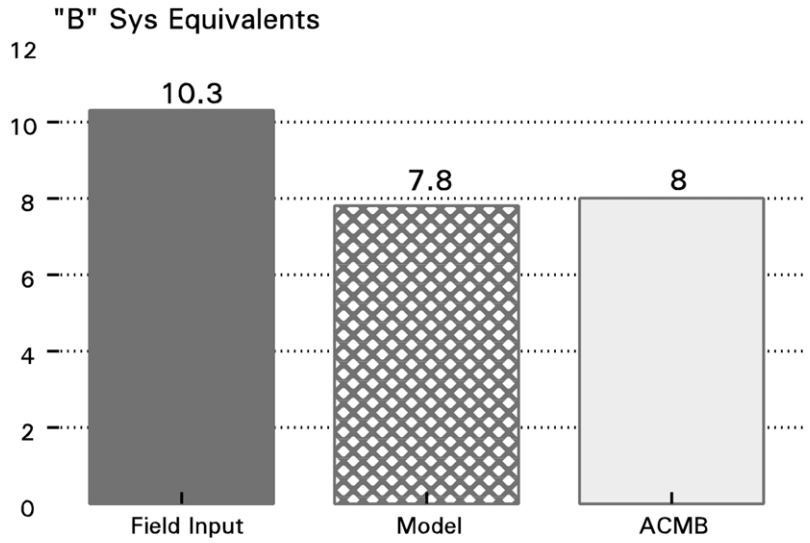
Enhanced Technology
Air Vs Water Cooled—Cheaper to Buy/Operate
Communications—$170,000 Device Replaced with $25,000—Savings Exceed $9M

Hardware Tuning—Up to 18% Cost Reduction

High Degree of Confidence in Sizing/Capacity

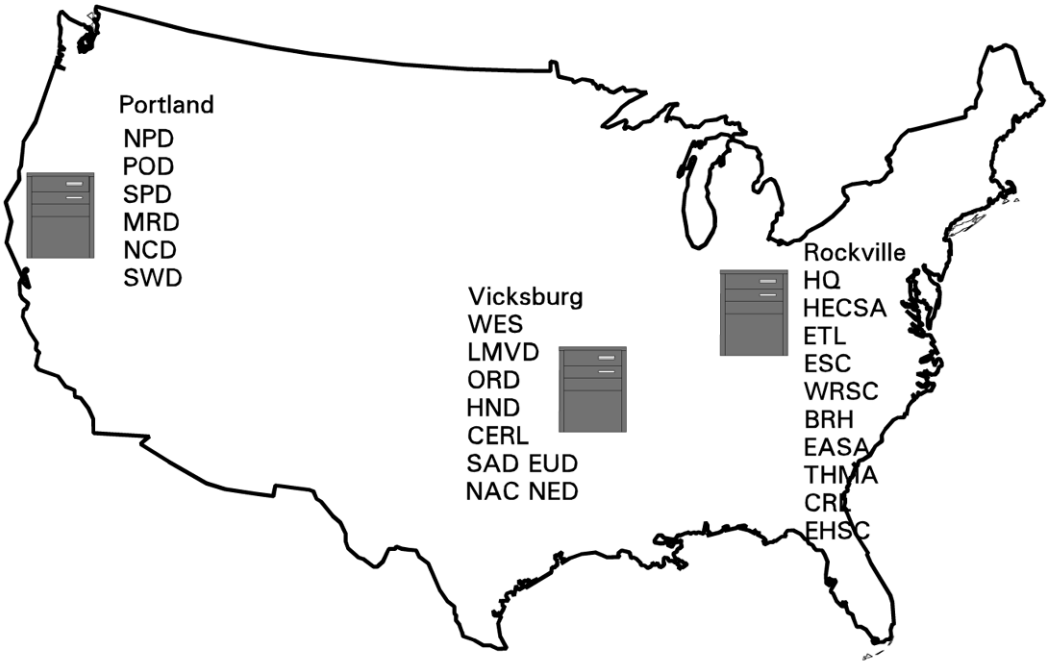
Initial Deployment
7.8 "B" Systems vs 37 Original
$33M vs $111M

ACMS
CPU Sizing Analysis

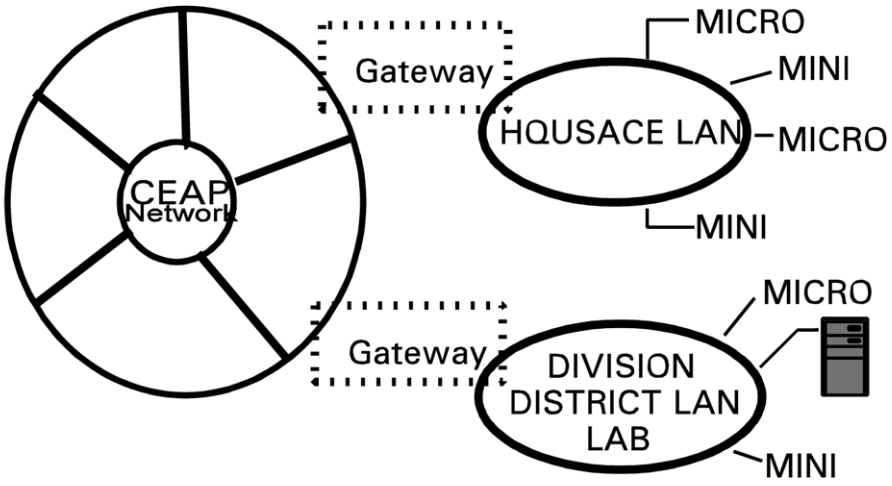


FY-91
Comparative Analysis

PROPOSED DEPLOYMENT



1995 USACE ARCHITECTURE



FOA OPTION AS TO
WHAT, WHERE, WHEN

EVOLUTION OF COST ESTIMATES

	Initial Investment
Estimate Prior to Contract Award	$111M
Estimate Based Upon Awarded Contract	$95M
Estimate for Recommended Deployment	$43M

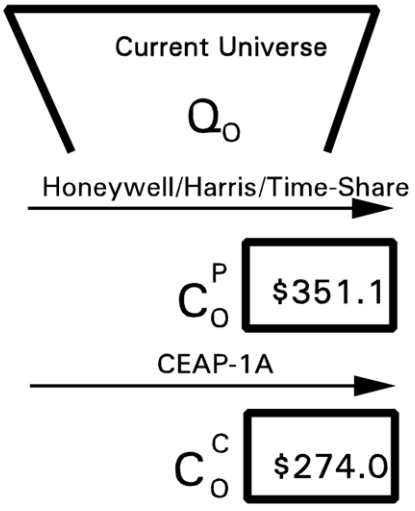
PRIP INVESTMENT PROGRAM
USACE 1995 ARCHITECTURE

($M)

	91	92	93	94	95
Additional CPU	2.1	5.8	1.6	1.3	1.3
Disk Storage (One Time)	4.9	0	0	0	0
Peripherals/Printers	2.5	0	0	0	0
Communications	4.1	0	0	0	0
Total	**13.6**	**5.8**	**1.6**	**1.3**	**1.3**

ECONOMIC ANALYSIS FRAMEWORK

(000,000)



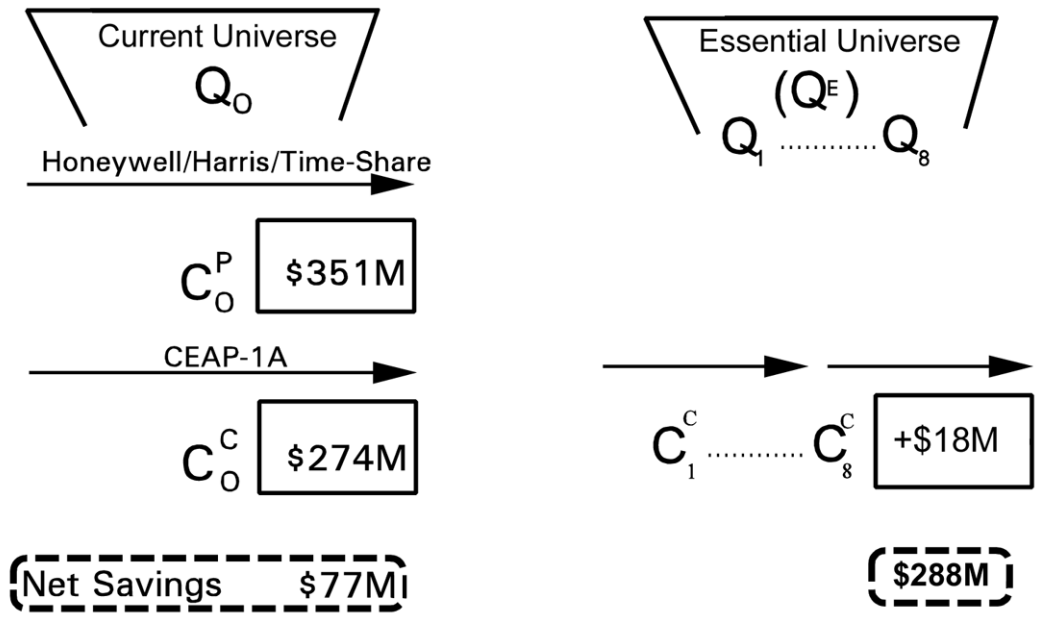
10-year life cycle

MODERNIZED WORKLOAD INCREMENTS

Q1	Project Management	Q1 thru Q8 are minimum essential to Corps operations—modernized PM & FM mode.
Q2	Financial Management	
Q3	Real Estate	
Q4	Programs Management	
Q5	Email & Encyclopedia	
Q6	Contracts Data Bases	
Q7	Employee Data Base	
Q8	PAX Data Extract	

Q9	Automated Review Mgmt	Q18	Planning
Q10	Integrated Logistics	Q19	Career Program
Q11	R&D Management	Q20	Frequency Mgmt
Q12	Contract Performance	Q21	Nat'l Invent Dams
Q13	Water Control	Q22	Land Mgmt
Q14	CAE/GIS	Q23	HQ Automation
Q15	Library, CEALS, Etc.	Q24	Other EIS
Q16	Safety Data Base	Q25	Local Uniques

ECONOMIC ANALYSIS FRAMEWORK
10-year life cycle



FOA CHARGES

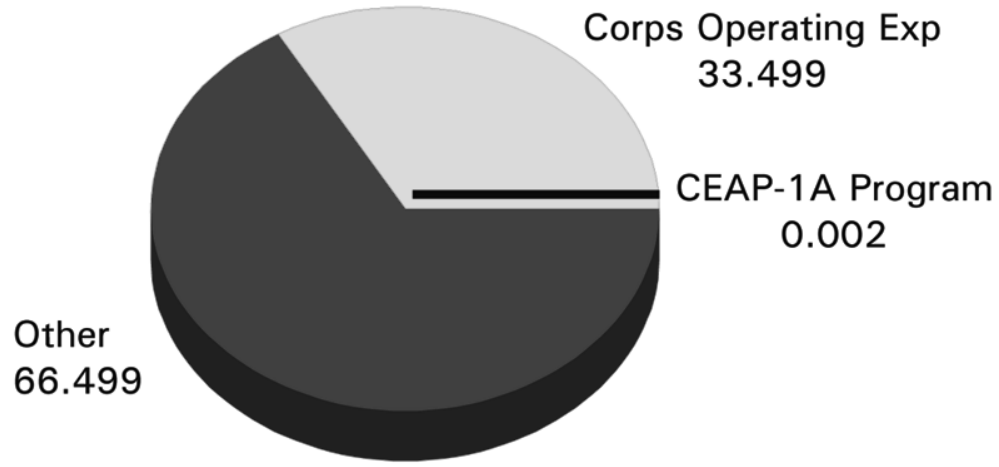
(000)

	Annual
Current Honeywell/Harris Charges	$754
Current CEAP Charges	$586

Average $164K Decrease per district

DOLLAR COMPARISONS

Total Corps Program = $9 Billion



By Percent

INCREMENTAL ANALYSIS
FUTURE SYSTEMS

I. Economic Justification for Software System to meet requirement.

II. In-house capacity available?
Yes.....No Purchase Decision
No..... Purchase Decision

III. Purchase Decision

$$C_9^C - C_9^{0ther} = \Delta \langle \pm \rangle ?$$

*

CONCLUSIONS

- Architecture provides for USACE information management needs for 1995
  - —Districts process most requirements on micros, minis, LANs
  - —Regional processing centers provide network services and other processing
  - —Districts feed Div/USACE requirements electronically
  - —Minimized data base requirements single data base for Div/HQ
- Configuration selected appropriate
- CEAP-1A contract more economical than time share or leasing
- Investment plan affordable

NEED APPROVAL OF

EXTENSION OF CDC CONTRACT

FOLLOWING INVESTMENT PLAN

FY	91	92	93	94	95
CEAP	13.6	5.8	1.6	1.3	1.3

$ in Millions